
Environmental Sustainability Planning 101

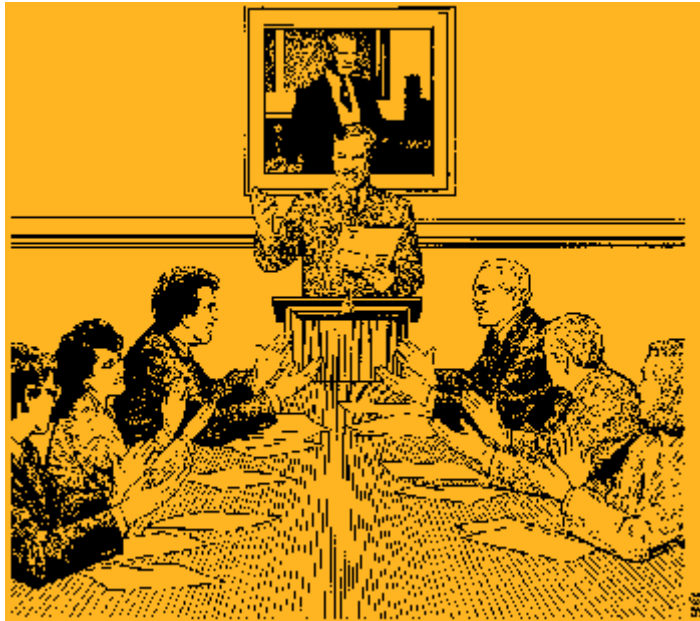
Kevin Greene

Illinois EPA

GGCC Sustainability Planning Workshop

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Presentation Objectives



- Review key elements of the sustainability planning process
 - Provide tips to simplify the process
 - Provide examples of sustainability plans
 - Tell you where to get more information and help
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What does the planning process involve?



- Document baseline impacts and accomplishments
- Set broad goals
- Establish objectives and measures (*what results are you trying to achieve and by when*)
- Identify strategies (*specific action steps to achieve the objectives*)

Quick Tips

- Use team approach
 - Think long-term
 - Brainstorm ideas
 - Focus on activities which you can control
 - Start with easier strategies/projects to build momentum before taking on major challenges
 - Keep the plan simple to review and revise
 - Seek employee suggestions
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Step 1: Collect data on baseline operations and environmental impacts

- Number of building locations (include leased space)
 - Total amount of building space occupied
 - Number of employees
 - Number of state-owned vehicles
 - Miles driven on agency business
 - Fuel use and percent of vehicles that use alternative fuels
 - Amount of paper consumed and percentage of virgin and recycled paper
 - Electricity usage (kwh)
 - Natural gas usage (therms)
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Sample Baseline Data

■ Illinois EPA (FY07)

- Building space: 347,700 square feet of space in main office
 - Number of full-time employees in main office: 781
 - Electricity: \$431, 000 (5,154,671 kwh)
 - Natural Gas: \$49,224 (50,499 therms)
 - Water: \$4,037
 - Number of vehicles owned: 200 and traveled 2.3 million miles
 - Percent of vehicles that are flex fuel or hybrid: 45%
 - Amount of office paper purchased: 14.3 million sheets (all copy paper is 30% post-consumer recycled content)
 - Total fuel purchased: 118,057 (33% E-85)
 - Solid Waste: TBD
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Sample Data



- Washington Marine Employees' Commission (2003)
 - ❑ Total building space: 889 square feet
 - ❑ Number of employees: 5 part time
 - ❑ Vehicles owned by agency: 0
 - ❑ Miles driven on agency business: 3,953

Step 2: Identify key operations and activities

- Generic Agency Operations:
 - Office operations
 - Facility construction, operations & maintenance
 - Fleets and transportation
 - Purchase of goods and services
 - Activities – Facility Operations:
 - Pest management, cleaning service, lighting & HVAC systems, recycling & waste disposal, renovation & remodeling, water use, grounds maintenance and stormwater control
 - Activities – Office Operations:
 - Paper use (forms, reports), office supplies & equipment (computers, printers), appliances, cafeteria and meetings/conferences
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Step 3: Identify major environmental impacts

OFFICE WASTE AUDIT FORM

GENERATION SITE	TYPES OF WASTE	APPROX. QUANTITY	RECYCLING POTENTIAL	COMMENTS
ex. MAIL ROOM	MP, OP, OCC, M	25 kg./week	good for OCC/OP	
PHOTOCOPY ROOM				
PRINTER AREA				
COMPUTER AREA				
FILE ROOM				
INDIVIDUAL WORKSTATIONS				
GENERAL OFFICE				
OTHER AREA(S)				
TOTALS		25 kg./week		

KEY

Computer Paper = CP
 White Ledger Paper = WL
 Coloured Ledger Paper = CL
 Mixed Fine Paper = MP
 Magazines = M

Old Newspaper = OP
 Old Corrugated Cardboard = OCC
 Glass Bottles, Jars = G
 Metal Cans = C

NOTES

Computer Paper: 18" tab
 White ledger: white bond, photocopy paper, laser paper, deposit slips, letter-sized computer paper
 Coloured Ledger: coloured bond and photocopy paper, cheques, carbonless forms
 Office Mixed: ledger plus onion skin, envelopes, manila file folders

- For each activity, ask:
 - ❑ What resources are consumed?
 - ❑ What are the results or products?
 - ❑ What wastes or emissions are generated?

Sample list of environmental impacts

■ Building Maintenance

- Produces hazardous waste, consumes materials, produces solid waste

■ Grounds Maintenance

- Uses fertilizer, pesticides, produces yard waste, uses water

■ Vehicle Operation and Maintenance

- Emits greenhouse gases, consumes fuel

■ Cafeteria

- Uses utilities, produces solid waste, uses vehicles for catering, uses water

■ Renovation

- Produces construction debris, produces solid waste, consumes materials
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Step 4: Set priorities for future action

- Identify key priorities on which to focus:
 - Scale of the impact (e.g., minor or have long-term consequences)
 - Frequency of impact (e.g. does the impact happen consistently, or only once in a while?)
 - Level of control (e.g., how much control does your agency have over that activity?)
 - Cost-savings (e.g., are there potential cost savings?)
 - Connection to agency mission (e.g., are the impacts directly related to the core mission of the department like protecting water or community engagement?)

Step 5: Establish long term goals



- Key directions to move over the long-term:
 - Foster long term thinking (five year or more)
 - Stated in general terms
 - Be meaningful to all employees
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Sample Goals

■ Massachusetts Registry of Motor Vehicles

- ❑ Reduce energy use and improve energy efficiency at all facilities
- ❑ Expand procurement of environmentally preferable products
- ❑ Reduce generation and costs of solid waste, especially paper
- ❑ Encourage sustainability efforts to be included in everyday employee activities
- ❑ Purchase and use of only alternative fuel and/or fuel efficient vehicles, including hybrids

■ Washington Office of the Forecast Council

- ❑ Utilize green supplies
 - ❑ Purchase energy efficient electronics only
 - ❑ Encourage efficient use of building resources by providing sustainable alternatives at meetings
 - ❑ Use alternative fuel vehicles when using motor pool or rental cars
 - ❑ Encourage staff to carpool to all major meetings
 - ❑ Collaborate with other agencies to host sustainability workshop for interested staff
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Step 6: Set objectives for environmental improvement

- Objectives (*What results are you trying to achieve?*)
 - Have specific dates (*do what by when*)
 - Reduce energy purchases by 1% annually from FY07
 - Reduce overall printing and writing paper consumption by 5% by 2012
 - By 2010, all office paper purchases meets minimum 30% post consumer recycled content
 - 50% of facilities will use green cleaners by 2012
 - Track water use, establish baseline data and set targets by 2008
 - Develop additional management systems to monitor recycling efforts
 - By 2012, 25% of purchases will be environmentally friendly products
 - Purchase hybrid vehicles as replacement cycle occurs and funding permits
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Sample Sustainability Objectives

- Objective: Decrease use of conventional fuels by 3% by 2012
 - Measure: Fuel purchases for fleet operations
- Objective: Decrease electricity consumption by 5% by 2012
 - Measure: Amount of electricity purchased
- Objective: Decrease amount of paper purchased by 10% by 2012
 - Measure: Amount of paper purchased by quantity and type
- Objective: Purchase three new environmentally preferable products and/or services every 2 years
 - Measure: Number of EPP products purchased

Illinois EPA (2007)

Sample Objectives

■ Washington Pollution Liability Insurance Agency

- ❑ Require the use of double sided copying when possible by 9/30/03
- ❑ Enroll in green power program by 10/1/03
- ❑ Work with building owner to convert to more efficient lighting ballasts
- ❑ Replace the use of a hard copy training request form with an electronic version by 12/30/03
- ❑ Replace Styrofoam cups with reusable cups/utensils in coffee area by 12/30/03
- ❑ Reduce use of personal printer to one per floor and only as a backup to the networked copier by 6/30/05
- ❑ Replace computer monitors with flat screens by 6/30/05

■ Massachusetts Department of Corrections

- ❑ Reduce water usage at DOC facilities by at least 10% by 2010, based on 2003 baseline levels
 - ❑ Achieve a 50% recycling rate by 2010 and implement comprehensive and cost effective waste prevention program
 - ❑ Continue to explore use of energy efficient equipment, conservation, use of alternative fuels and renewable energy, and changes in employee practices
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Step 7: Identify future strategies/projects for improvement

- U.S. Environmental Protection Agency, *Greening EPA*
www.epa.gov/oaintrnt/index.htm
 - Portland Office of Sustainable Development, *Green Office Guide*
www.resourcesaver.org/file/toolmanager/O16F22121.pdf
 - National Park Service, Pacific West Region, *Green Office Practices Guide*
www.nps.gov/climatefriendlyparks/downloads/Green%20Office%20Guide%202003.pdf
 - North Carolina Department of Environment and Natural Resources, Division of Pollution Prevention and Environmental Assistance, *Checklist for Office Sustainability*
www.p2pays.org/ref%5C05/04040.pdf
 - Business and Industry Resource Venture, *Paper Smart Office: Tips to Work By*
www.resourceventure.org/green-your-business/waste-prevention-recycling/paper/the-paper-smart-office-tips-to-work-by
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Prioritizing which strategies/projects to carry out

Question	Yes	No
Will the action result in significant environmental benefits?		
Will the action result in a cost savings over the life of the product/action?		
Is the time frame and ease of implementation manageable given agency resources?		
Could the action reduce compliance obligations (e.g., eliminate a hazardous waste)?		
Is the issue of significant concern to employees, or those who use your services?		
Does the activity have educational value or high visibility?		

Sustainability Plan Outline

- Long Term Goal #1: Reduce energy consumption and increase energy efficiency
 - Area of operation: Purchase of Goods and Services
 - Objective #1:
 - Measure:
 - Strategies:
 - Strategy #1
 - Strategy #2
 - Strategy #3
 - Area of operation: Facility, Construction, Operations & Maintenance
 - Objective #1:
 - Measure:
 - Strategies:
 - Strategy #1
 - Strategy #2
-

Sample Sustainability Plan

- **Goal: Increase Fleet Efficiency and Use of Green Vehicles**
 - Objective: Decrease use of conventional fuels by 3 percent by 2012
 - Measure: Fuel purchases for fleet operations
 - Strategies:
 - Encourage employees to carpool to conferences and major meetings
 - Identify strategies to increase use of video- and phone-conferencing
 - Investigate feasibility of providing incentives to employees to commute to work by using non-vehicles alternatives
 - Replace older vehicles, as appropriate, with higher efficiency, lower emission vehicles, such as gasoline hybrids
 - Improve education on the use of E-85 powered vehicles and location of refueling stations
 - Work with CMS to add E-85 hybrids to the state vehicle fleet when they become available

Illinois EPA (2007)

Sample Plan

- Minimize energy and water use
 - Area of operation: Grounds Maintenance
 - Objective: Reduce water consumption and increase water reuse
 - Measure:
 - Annual water costs
 - Strategies:
 - Establish baseline data and set annual targets by September 1, 2004
- Establish specific water irrigation times and duration, and install timers where possible
- Establish schedule to maintain/repair existing systems to eliminate watering of streets, sidewalks and buildings
- Include water conservation requirements into future-leased space standards and specification
- Increase use of graywater to hydrate plants, wherever practical

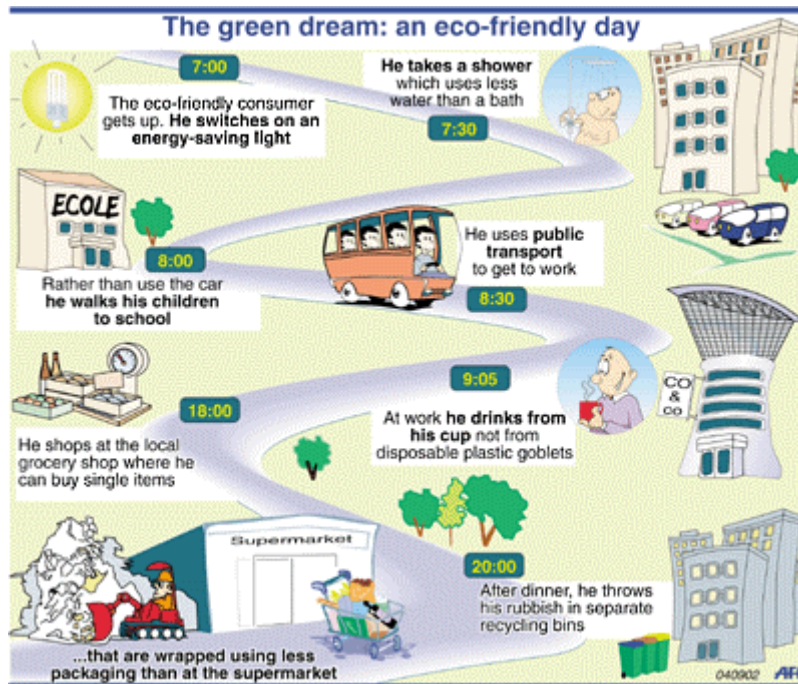
*WA State Dept. of Social and Health Services
Sustainability Plan (2003)*

Sample Plan

- Expand Markets for Environmentally Friendly Products and Services
 - Area of Operation: Purchase of Goods and Services
 - Objective: All janitorial services in owned or leased facilities will use environmentally friendly products (EFP) to the fullest extent allowable under health and safety regulations by 2009
 - Measure: % of worksite that include use of EFP
 - Strategies:
 - Establish baseline and target periodic improvements by 9/1/2004
 - Revise/review strategic plans, administrative policies, desk manuals, etc. as appropriate to include sustainable janitorial practices
 - Revise vendor solicitation forms, new contracts/leases to include the requirement
 - Notify staff responsible for janitorial purchasing, contracting and leasing
 - Set time limit for purchasing and contracting staff to notify vendors of upcoming change and for completion of this strategy
 - Continue to evaluate EFP for institutional/residential use

WA State Dept. of Social and Health Services Sustainability Plan (2003)

State Agency Sustainability Plans



- Massachusetts Executive Office of Energy and Environmental Affairs, *Agency Sustainability Plans*
www.mass.gov/envir/Sustainable/initiatives/ss_plans.htm
- Sustainable Washington, *State Agency Sustainability Plans*
www.ofm.wa.gov/sustainability/submitted.htm
- Oregon State, *Agency Sustainability Updates*
www.sustainableoregon.net/agency

Questions?

